



Automatización Eléctrica
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Measuring instrument - EEM-MA250 - 2901363

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Energy measurement device to measure electrical parameters in low voltage installations up to 500 V, acquisition of total harmonic oscillations - can be expanded with RS-485 interface

Why buy this product

- RS-485 interface (JBUS/MODBUS)
- Pulse output
- Two-tariff measurement via pulse input



Key Commercial Data

Packing unit	1 STK
GTIN	 4 046356 585811

Technical data

Note

Utilization restriction	EMC: class A product, see manufacturer's declaration in the download area
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Dimensions

Width	72 mm
Height	90 mm
Depth	64 mm

Ambient conditions

Degree of protection	IP51 (front), IP20 (back)
Ambient temperature (operation)	-10 °C ... 55 °C (14 °F to 131 °F)
Ambient temperature (storage/transport)	-20 °C ... 70 °C (-4 °F to 158 °F)
Max. permissible relative humidity (operation)	≤ 95 %
Max. salt spray content	≤ 2.5 %
Altitude	≤ 2000 m
Ambient temperature (operation)	5 °C ... 40 °C

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Technical data

Ambient conditions

Max. permissible relative humidity (operation)	80 % (up to 31 °C)
	50 % (at 40 °C)

Input data

Measuring principle	True r.m.s. value measurement
Acquisition of harmonics	up to 51st harmonic
Measured value	AC sine (50/60 Hz)
Input name	Voltage measuring input V1, V2, V3
Input voltage range	50 V AC ... 519 V AC (Phase/Phase) 28 V AC ... 300 V AC (Phase/neutral conductor)
Precision	0.2 %
Input current range	Via external transformers
Input current	9999 A (primary) 5 A (secondary)
Overload capacity	6 A (Permanent)
Response threshold from measuring range nominal value	5 mA
Precision	0.2 %
Messbereich_Leistung	0 kW ... 9999 kW 0 kvar ... 9999 kvar 0 kVA ... 9999 kVA
Precision	0.5 %
Active energy (IEC 62053-22)	Class 0.5 S
Reactive power (IEC 62053-23)	Class 2
Description of the input	Digital input
Number	1
Voltage input signal	230 V AC #10 % (Tariff switchover: e.g., day/nighttime tariff)

Output data

Output description	Transistor output, active
Number	1
Maximum switching voltage	30 V DC
Current carrying capacity	27 mA

Interfaces

Designation	Modbus RTU/JBUS
Interface	RS-485
Connection method	Screw terminal blocks
Serial transmission speed	2,4 ... 38.4 kbps

General

Display	LCD display, backlighting
Measuring rate	approximately
Supply voltage range	110 V AC ... 277 V AC -10 % ... +15 %

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Technical data

General

Nominal power consumption	5 VA
Mains type	3-phase (3 or 4-wire), 2-phase (2-wire), and single-phase (1-wire)
Color	black
Conformance	CE-compliant
Rated insulation voltage	300 V AC (EN 61010-1)
Overvoltage category	III
Test voltage	3.5 kV AC (50 Hz, 1 min.)
	2.2 kV AC (50 Hz, 1 min.)

Connection data

Conductor cross section flexible min.	0.5 mm ²
Conductor cross section flexible max.	2.5 mm ²
Conductor cross section solid min.	0.5 mm ²
Conductor cross section solid max.	2.5 mm ²
Conductor cross section AWG min.	20
Conductor cross section AWG max.	14
Connection method	Screw connection
Stripping length	6 mm
Tightening torque	0.6 Nm
Note	other connections
Conductor cross section flexible min.	0.5 mm ²
Conductor cross section flexible max.	4 mm ²
Conductor cross section solid min.	0.5 mm ²
Conductor cross section solid max.	4 mm ²
Conductor cross section AWG min.	20
Conductor cross section AWG max.	10
Stripping length	6 mm
Note	Current and voltage connection

UL data

Nominal supply voltage range	110 V AC ... 277 V AC -10 % ... +15 %
Operating mode	Indoor use
Surge voltages	Transient overvoltage according to installation classes
Overvoltage category	I, II, III
Overvoltage category of the supply	Min. II

Standards and Regulations

Conformance	CE-compliant
UL, USA / Canada	UL 61010-1
	CSA-C22.2 No. 61010-1
	cULus

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Classifications

eCl@ss

eCl@ss 4.0	27210902
eCl@ss 4.1	27210902
eCl@ss 5.0	27210902
eCl@ss 5.1	27210902
eCl@ss 6.0	27371890
eCl@ss 7.0	27142333
eCl@ss 8.0	27142333

ETIM

ETIM 3.0	EC001505
ETIM 4.0	EC000705
ETIM 5.0	EC002301

UNSPSC

UNSPSC 6.01	30211916
UNSPSC 7.0901	39121535
UNSPSC 11	39121535
UNSPSC 12.01	39121535
UNSPSC 13.2	39121535

Approvals

Approvals

Approvals

UL Listed / cUL Listed / EAC / EAC / cULus Listed

Ex Approvals

Approvals submitted

Approval details

UL Listed 

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Approvals

cUL Listed 

EAC

EAC

cULus Listed 

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Product	Code	Reference	Product link
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